IN THE CLAIMS

Please amend the claims as follows:

1. (original) A waveguide structure for upconversion of IR wavelength laser radiation comprising a) at least one base substrate layer made essentially out of a moisture-stable mechanically- and/or temperature-stable material; b) at least one active layer made essentially out of a halide glass, preferably a fluoride glass located on the base substrate layer whereby the material of the at least one base substrate layer has a different composition from the material of the at least one active layer

2. (original) A waveguide structure according to Claim 1, whereby the efficacy of the waveguide structure is ≥10 % and ≤90%, the efficacy being defined as

$$\frac{\textit{radiated and/or emitted power of usable radiation out of the waveguard structure}}{\textit{IR}-\textit{power absorbed in the waveguide structure}} * 100$$

and usable radiation being defined as upconverted light in red, green and/or blue

3. (currently amended) A waveguide structure according to claim 1 ~~or 2~~, whereby the thickness of the active layer is ≥0 and ≤5 μm.

4. (currently amended) A waveguide structure according to claim 1 ~~or 3~~, whereby the active layer material is selected out of a group containing: - ZBLAN, consisting essentially of the components ZrF_4, BaF_2, LaF_3, AlF_3 and NaF, doped with one or more rare earth ions from the group Er, Yb, Pr, Tm, Ho, Dy, Eu, Nd or a combination thereof, - one or more of the crystals $LiLuF_4$, $LiYF_4$, BaY_2F_8, SrF_2, $LaCl_3$, KPb_2Cl_5, $LaBr_3$ doped with one or more rare earth ions from the group Er, Yb, Pr, Tm, Ho, Dy, Eu, Nd or a combination thereof, - one or more of the rare earth doped metal fluorides Ba-Ln-F and Ca-Ln-F, where Ln is one or more rare earth ions from the group Er, Yb, Pr, Tm, Ho, Dy, Eu, Nd or a combination thereof, or mixtures thereof. or mixtures thereof.

5. (currently amended) A waveguide structure according to ~~any of the claims 1 to 3~~claim 1, whereby the base substrate layer material has a weakening temperature of ≥300 °C and ≤2000 °C and/or has a lower refractive index than the active layer material.

6. (currently amended) A waveguide structure according to ~~claims~~

~~1 to 5~~claim 1, whereby the base substrate layer material is selected out of a group comprising quartz glass, hard glass, MgF_2 and mixtures thereof.

7. (currently amended) A waveguide structure according to ~~claims 1 to 6~~claim 1, whereby the active layer is coated on the base substrate layer by hot dip spin coating.

8. (currently amended) A waveguide structure according to ~~claims 1 to 7~~claim 1, whereby

- a length of the active layer is ≥ 100 μm and ≤ 100,000 μm, preferably ≥ 200 μm, more preferably ≥ 500 μm and most preferably ≥ 1000 μm and ≤ 50,000 μm; and/or
- a width of the active layer is ≥ 1 μm and ≤ 200 μm

9. (currently amended) A waveguide structure according to ~~claims 1 to 8~~claim 1, furthermore comprising a sealing layer located on the active layer in such a way, that the active layer is between the base substrate layer and the sealing layer, the sealing layer material being preferably selected out of a group comprising SiO_2, higher index of refraction materials, preferably Al_2O_3 and/or Si_3N_4, polymers, spin on glass or mixtures thereof, either alone or in combination with an optical isolation layer, preferably from

undoped ZBLAN.

10. (currently amended) A lighting unit comprising at least one of the waveguide structures according to ~~one of the claims 1 to 9~~claim 1, being designed for the usage in one of the following applications: - shop lighting, - home lighting, - accent lighting, - spot lighting,

- theater lighting, - automotive headlighting, - fiber-optics applications, and projection systems